

1910.253(e)(3)(ii)

Approved protective equipment (designated P(F) in Figs. Q-1, Q-2, and Q-3) shall be installed in fuel-gas piping to prevent:

1910.253(e)(3)(ii)(A)

Backflow of oxygen into the fuel-gas supply system;

1910.253(e)(3)(ii)(B)

Passage of a flash back into the fuel-gas supply system; and

1910.253(e)(3)(ii)(C)

Excessive back pressure of oxygen in the fuel-gas supply system. The three functions of the protective equipment may be combined in one device or may be provided by separate devices.

1910.253(e)(3)(ii)(C)(1)

The protective equipment shall be located in the main supply line, as in Figure Q-1 or at the head of each branch line, as in Figure Q-2 or at each location where fuel-gas is withdrawn, as in Figure Q-3. Where branch lines are of 2-inch pipe size or larger or of substantial length, protective equipment (designated as P(F)) shall be located as shown in either Q-2 and Q-3.

1910.253(e)(3)(ii)(C)(2)

Backflow protection shall be provided by an approved device that will prevent oxygen from flowing into the fuel-gas system or fuel from flowing into the oxygen system (see S(F), Figs. Q-1 and Q-2)

1910.253(e)(3)(ii)(C)(3)

Flash-back protection shall be provided by an approved device that will prevent flame from passing into the fuel-gas system.

1910.253(e)(3)(ii)(C)(4)

Back-pressure protection shall be provided by an approved pressure-relief device set at a pressure not greater than the pressure rating of the backflow or the flashback protection device, whichever is lower. The pressure-relief device shall be located on the downstream side of the backflow and flashback protection devices. The vent from the pressure-relief device shall be at least as large as the relief device inlet and shall be installed without low points that may collect moisture. If low points are unavoidable, drip pots with drains closed with screw plugs or caps shall be installed at the low points. The vent terminus shall not endanger personnel or property through gas discharge; shall be located away from ignition sources; and shall terminate in a hood or bend.